REMARKS/ARGUMENTS

Claims 30, 35, 36, 38-44 and 46-59 are pending in this application. By this Amendment, Claims 30 and 52 are amended, and Claim 59 is added. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Independent Claims 30 and 52 are amended for clarity purposes only to recite that cooling chamber is open on its bottom with regard to the force of gravity. In fact, the Applicants respectfully submit that the amendment for Claims 30 and 52 clarify a reference frame for the claimed term "bottom" in Claims 30 and 52. This feature is clearly supported by the originally filed application. For example, Fig. 2 shows a cooling chamber 1' open on its bottom with respect to the gravitational pull. The cooling chamber 1' is shown next to the cooling agent storage container 2' housing cooling agent 3' in liquid form at the bottom of the storage container with respect to the same gravitational pull.

Claim 59 recites that the cooling chamber is bell shaped. Support for the new claim 59 is shown, for example at Fig. 2 and Page 8, lines 17-18 of the originally filed application. Accordingly, no new matter is added.

35 U.S.C. § REJECTIONS

Thomas and Boese

Claims 30, 37, 38, 41, 42, 44, 46-49, 52, 53 and 56-58 stand rejected under 35 U.S.C. §103(a) over Thomas (U.S. Patent No. 6,389,828) in view of Boese (U.S. Patent No. 4,566,283). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Thomas fails to teach a heater with an adjustable first heating performance for heating the cooling agent supplied to the cooling chamber integrated in the cooling agent's supply line, a second temperature sensor for measuring an agent temperature of the cooling agent supply to the cooling chamber, and an evaporator in the cooling agent storage container with an adjustable second heating performance for evaporating the cooling agent present in the cooling agent storage container, with the controller being connected to the second temperature sensor and the evaporator. The Examiner asserts that it would have been obvious to have modified the cooling equipment of Thomas to include the heaters disposed inside the cooling supply line and tank as taught by Boese in order to provide fine control of the cooling agent being supplied. The Examiner further asserts that it would have been obvious to modify the cooling equipment of Thomas to include the temperature sensor being disposed inside of the cooling supply line as taught by Boese in order to vary the temperature of the cooling agent supplied to the chamber.

Regardless of these assertions, Applicants respectfully submit that Thomas and Boese do not teach that the cooling chamber is open on its bottom with regard to the force of gravity, as previously recited in Claim 45 and added to independent Claims 30 and 52. The Examiner asserts that Thomas teaches that the cooling chamber is open on its bottom as illustrated in Fig. 11, where chamber 503 is open on its left side where an arrow is disposed between the heater 509 and the temperature sensor 550. However, Fig. 11 of Thomas clearly discloses that the cooling chamber 503 is closed at its bottom. In fact, both prior art reference, Thomas and Boese merely disclose cooling chambers that are closed. Therefore, Applicants respectfully submit it would not have been obvious to a person skilled in the art to have combined Thomas and Boese

to arrive at a cooling chamber being open on its bottom with regard to the force of gravity, as recited in Claims 30 and 52. Accordingly, independent Claims 30 and 52, and their dependent Claims 38, 41, 42, 44, 46-49, 53 and 56-58 are believed to be allowable over the combination, at least for not teaching the claimed opened bottom cooling chamber. Applicants further submit that Claim 37 was cancelled in a previous Amendment, rendering its rejection moot. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

Thomas, Boese and Ritter

Claims 35 and 54 stand rejected under 35 U.S.C. §103(a) over Thomas as modified by Boese, and further in view of Ritter (U.S. Patent No. 3,245,248). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Thomas as modified by Boese fails to teach that several temperature sensors connected to the controller are provided for measuring the chamber temperature in the cooling chamber and are arranged in a spatially distributed manner for measuring a spatial distribution of temperature, and asserts that it would have been obvious to modify the cooling equipment of Thomas and Boese to include the multiple temperature sensors to enable the control to adjust the temperature accordingly. However, Ritter does not teach a cooling chamber having an open bottom with regard to the force of gravity, as recited in Claims 30 and 52, from which Claims 35 and 54 depend. In fact, as shown in Fig. 1 of Ritter, the Dewar flask 1 is clearly closed at its bottom. Therefore, the combination of Thomas, Boese and Ritter would not have arrived at the subject matter of Claims 35 and 54. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

Thomas, Boese, Ritter and Sitte

Claims 36 and 55 stand rejected under 35 U.S.C. §103(a) over Thomas, Boese and Ritter, and further in view of Sitte (U.S. Patent No. 6,178,757). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Thomas, Boese and Ritter fail to teach at least one of the temperature sensors is a temperature-dependent electrical resistor, and asserts that it would have been obvious to have modified the cooling equipment of Thomas, Boese and Ritter to include the use of a temperature-dependent electrical resistor as taught by Sitte to effectively measure a wide range of temperatures. However, Sitte does not teach the claimed subject matter missing in the above-discussed references, as the cooling chamber 3 of Sitte is also closed at its bottom. Therefore, the combination of Thomas, Boese, Ritter and Sitte would not have resulted in the feature of a cooling chamber having an open bottom with regard to the force of gravity, as recited in Claims 30 and 52, from which Claims 36 and 55 depend. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

Thomas, Boese and Hammerstedt

Claim 39 stands rejected under 35 U.S.C. §103(a) over Thomas, Boese and further in view of Hammerstedt, et al. (U.S. Patent No. 6,065,294). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Thomas and Boese fail to teach that the first temperature sensor and the second temperature sensor are connected to storage equipment that stores the temperature courses, and asserts that it would have been obvious to modify the combination to

include a memory that stores temperature courses as taught by Hammerstedt in order to control the temperature of the chamber based on past temperature trends. This assertion is respectfully traversed, as Hammerstedt does not teach a cooling chamber having an open bottom with regard to the force of gravity, as recited in Claim 30, from which Claim 39 depends, and therefore does not teach this feature missing in Thomas and Boese. In fact, as can best be seen in Fig. 3, the container 30 of Hammerstedt is clearly closed at its bottom. Therefore, the combination of references would not have resulted in this feature. Withdrawal of the rejection of Claim 39 is respectfully requested.

Thomas, Boese and Lee

Claims 40 and 43 stand rejected under 35 U.S.C. §103(a) over Thomas, Boese and further in view of Lee (U.S. Patent No. 5,335,503). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Thomas and Boese do not teach that the cooling agent supply line is adapted to empty via a diffuser into the cooling chamber, or that the supply line is adapted to empty into the cooling chamber at the top of the cooling chamber as recited in Claims 40 and 43, respectively, and asserts that it would have been obvious to modify the combination with the teaching of Lee to arrive at the claimed features. However, Lee also does not teach a cooling chamber having an open bottom with regard to the force of gravity, as recited in Claim 30 from which Claims 40 and 43 depend. That is, the refrigerator compartment 14 of Lee is clearly shown as being closed at its bottom end. Therefore, a combination of Thomas, Boese and Lee would not have arrived in the claimed features. Withdrawal of the rejection under 35 U.S.C.

§103(a) is respectfully requested.

Thomas, Boese and Bash

Claims 50 and 51 stand rejected under 35 U.S.C. §103(a) over Thomas, Boese and further in view of Bash, et al. (U.S. Patent No. 7,031,154). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner admits that Thomas and Boese do not teach the features added by Claims 50 and 51, and asserts that it would have been obvious to modify the cooling equipment of Thomas and Boese to include the transmitting of temperature data wirelessly to a controller as taught by Bash in order to eliminate the use of wires. However, Bash also does not teach a cooling chamber having an open bottom with regard to the force of gravity, as recited in Claim 30, from which Claims 50 and 51 depend. Therefore, a combination of Thomas, Boese and Bash would not have resulted in the subject matter of Claims 50 and 51. Withdrawal of the rejection of the claims under 35 U.S.C. §103(a) is respectfully requested.

CONCLUSION

For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below to expedite the prosecution of the application.

Respectfully submitted,

CAESAR, RIVISE, BERNSTEIN,
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January 22, 2010

By _____
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Please charge or credit our Account No. 03-0075 as necessary to effect entry and/or ensure consideration of this submission.

CERTIFICATE OF MAILING/TRANSMISSION PURSUANT TO 37 CFR 1.8

I hereby certify that this correspondence and any attachments referenced therein is/are being mailed/transmitted to the USPTO by: (A) first class U.S. mail with sufficient postage (37 CFR § 1.1(a)); (B) facsimile (37 CFR § 1.6 (d)); or (C) EFS-Web (37 CFR § 1.6(a)(4)) on the date shown below.

Date: January 22, 2010 Signature: _____

Name: Michael J. Cornelison